REMARKS

The present Amendment revises several paragraphs in the specification in order to improve the idiomatic English. It also provides an Abstract (which is attached to the Amendment on a separate page) that has been revised to improve the idiomatic English and to delete claim-type language. Accordingly, it is respectfully submitted that the objection in section 2 of the Office Action has been overcome.

In addition, the present Amendment revises claims 1 and 3 to improve their form under U.S. claim-drafting practice and also to specify that there is a predetermined maximum current momentarily when operation starts. This is supported, for example, by Figure 4 of the application's drawings and by the discussion beginning at the bottom paragraph on page 7.

The Office Action rejects claim 1 for anticipation by Masatake, and rejects claim 3 for obviousness on the basis of Masatake in view of Satoru. For the reasons discussed below, however, it is respectfully submitted that all of the independent claims now pending in this application (that is, claims 1, 3 and 4) are patentable over these references.

Claim 1 recites "input means (13) which outputs the average value of the joystick voltage ... read at every sampling time over a predetermined number of past occasions ...". The paragraph at the middle of page 3 of the Office Action takes the position that Masatake calculates an average value. However, it is respectfully submitted that the passages of Masatake that are cited in the Office Action do not support this conclusion. Instead, when Masatake's Figures 1 and 2 are considered in conjunction with paragraph

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[0022], it would appear that Masatake's section 14 detects an "operation cycle" (presumably meaning movement of Masatake's lever 8 to or from the neutral position) on the basis of a signal from Masatake's switch 10, and then power is reduced or increased gradually as shown in Masatake's Figure 2. Nothing in this arrangement would suggest averaging the value of a joystick voltage.

Claim 1 has been amended to recite an " operation start detecting means which detects an operation start when the joystick (10) is pushed over from the neutral position," and provides (in a "wherein" clause) that a predetermined maximum current occurs momentarily when the start of operation is detected. At the middle of page 5, the Office Action asserts that Masatake does not teach an operation start means, but takes the position that the Satoru reference does. The Office Action takes the position that it would have been obvious to modify Masatake in accordance with Satoru.

The trouble with the position taken in the Office Action is that Masatake **does** disclose an operation start detecting means. It is Masatake's neutral switch 10. Moreover, even though Satoru's arrangement appears to raise an output value during a prescribed time, there is nothing to suggest a **momentary** increase to a predetermined maximum current.

It is respectfully submitted that independent claim 3 is patentable over the references for reasons along the lines discussed above with respect to claim 1.

New independent claim 4 provides that an input signal is sampled to generate a sequence of digital samples. The claim then recites, "means for generating a sequence of digital computed values from a latest one of the samples and a predetermined number of earlier samples." It is respectfully submitted that this is neither disclosed nor suggested by either of the references.

Since new claims 5-8 depend from claim 4 and recite additional limitations to further define the invention, they are patentable along with claim 4 and need not be further discussed.

For the foregoing reasons, it is respectfully submitted that the application is now in condition for allowance. Reconsideration of the application is therefore respectfully requested.

Respectfully submitted,

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AW:rw

Abstract

A signal processor for a joystick which ~~comprises~~ <u>includes</u> a joystick input device (11) which varies <u>a</u> joystick voltage input value Vi according to an operating amount of a joystick (10) from a neutral position (11), an input ~~means~~ <u>circuit</u> (13) which outputs the average value of the joystick voltage input value Vi read at every sampling time over a predetermined number of past occasions as a joystick voltage computation value Vic, <u>a</u> computation ~~means~~ <u>circuit</u> (14) which computes an output computation value Voc set according to the joystick voltage computation value Vic, and operation start detecting ~~means~~ <u>circuit</u> which detects an operation start when the joystick (10) is pushed over from the neutral ~~are provided.~~ <u>position.</u> The computation ~~means~~ <u>circuit</u> (14) increases the output computation value Voc to an effective maximum value when operation starts. In this way, over-sensitivity of <u>the</u> control response when there is a sudden operation of the joystick ~~10~~ <u>(10)</u> is suppressed.